THE CROTON SHED.

Investigation of the Great Reservoir and Its Tributaries.

OUTRAGEOUS ABUSES ALONG THE WATER LINE.

Fever and Ague Regions and Malarious Spots.

How the Property Owners Taint the Water and Defy the Law.

THE LARE A REPOSITORY OF FARM FILTH.

Rustic Sewerage and Dwelling House Drainage Between Pine's Bridge and Croton Falls.

The Whitlock Slaughter House and Other Pests.

There has been a great deal of discussion for many years about the water supply of New York city, and emical experts have from time to time undertaken by elaborate analyses to show why Croton as it is served in every vital impurities. Much vexatious disputation has resulted in this time the question as to whether New York water is the best that can be furnished remains just as unsettled as over, and the advocates of either side are as tenacious of their opinions as they ever were. The prevailing belief is that Croton water is not as good as it should be, because of the outrageous abuses existing all along the watershed from Croton dam at the foot of the lake upwards. These have continued for years, and are greater to-day, perhaps, than they ever were before, for the Croten Board has been powerless to deal with or abate them, having no authority to remove the slaughter houses, privies, barns, cattle vards and sties built upon the branbes of the Croton and Cross rivers, and all the streams that feed the principal reservoir, Croton Lake. Day after day the inhabitants of the villages and townships of Putnam and Westchester counties, the location of the watershed, have written letters to the Board, complaining of the shameful conduct of the factorymen, butchers and farmers residing in the region. Requests and protests have poured into the department calling for some remedial action, and the Corporation Counsel has been notified by the officers again and again to proceed if possible against the delinquents. But after careful examination of the laws he found that he could not do anything toward effecting the much needed relief, as the only act relating to the matter was that passed May 7, 1845, entitled "An act to prohibit the throwing or depositing in the Croton Aqueduct, or either of the resorvoirs, any dead animals or other offensive matter, or anything To understand the Board's position with regard to

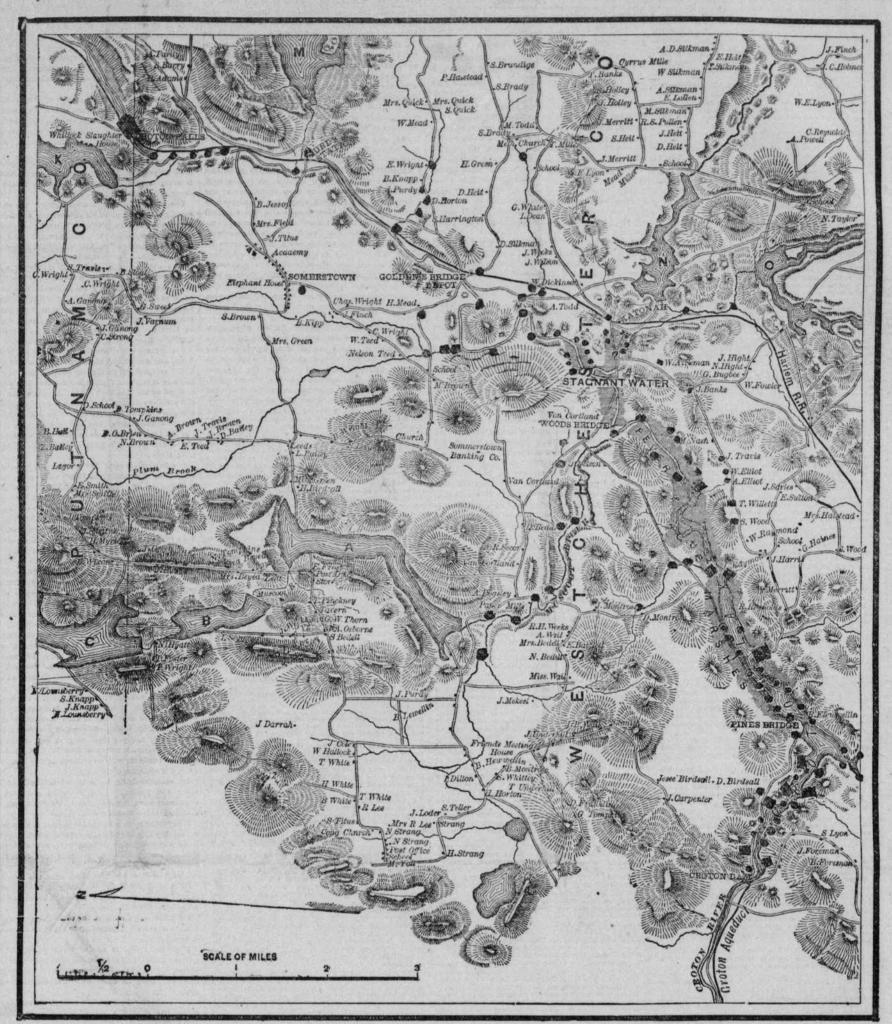
these abuses it is necessary to glance at the map of the watercourses in and around the principal reservoir-Oroton Lake. The act applies to this, the aqueduct and the reservoir at High Bridge and elsewhere, but the rivers and streams that pour into the lake from the hills and mountains are not mentioned; hence, it is plaimed, the department cannot interfere with any of the squatters or property owners who deliberately poison the sources of the New York water supply; so they remain and increase. Notwithstanding the charges preferred almost daily against them these fellows coolly deny that they are injuring the water, and have even the audacity to say that the erection of a privy on the river bank or the dumping of farm and factory filth into the stream is not a nuisance, much less a crime. We shall see. THE NEW YORK HERALD, after patiently waiting for the department's action in these cases, and bearing the oft retterated charges, decided to investigate the subject and sent one of its attaches to travel from the dam up both sides of the lake to the mouth of each stream, with instructions to follow it to its source and carefully note down every plague spot, describe and, if necessary, sketch it. The task was not an easy one, requiring time, caution and the exercise of the sides of Croton Lake and its numerous tributaries was travelled over, sometimes on foot, on horseback and otherwise. A boat had to be used once or twice, and no means of obtaining an accurate description of the berewith the first instalment of the work and a man of the sections explored. It comprises that part of Westchester county between Croton Dam and Croton Falls, through which run Cross, Croton, Kiso, Turkey, Cat Hill, Cherry, Plum and a dozen smaller rivers, which empty themselves into Croton Lake and the main stream at different points through a Aretch of country about twenty-five miles square. Fround the lake, of course, the law above mentioned being specifically relative to abuses in that vicinity, the infringements are not so glaring, although frequent and bad enough to warrant oclaive action. Their principal characteristics differ entirely from those to be found above Croon Falls and in the immediate vicinity of Lake Glarcida, Brewster's Station and Carmel, where ounouses, privies, slaughter houses and factories abound. Around the large lake, as shown in the map, tagnant water, fever and ague swamps, filthy drains ad wayside sloughs are seen, and on the river bank cattle pens and dirty yards. INTERVEW WITH MR. BIRDSALL.

On Monday, November 22, Mr. Campbell, Chief Engineer of the Crota Aqueduct Department, made the aunual inspection i the aqueduct. The water was shut off at six in the cyning of that day, and not turned on again until the follwing Thursday. During the intervening days Mr. Co-pbell went through the aqueduct to ascertain whether it needed any repairs. The distance travelled warnearly thirty-eight miles from the dam to High Bridge and the repairs necessary were not as great as were atticipated. Mr. Campbell met with a serious accident at the conclusion of his labors, and has not been able to come down town for some days. His assistant, Mr. Birdsall, who made the inspection of the pipes on danhattan Island, told a HERALD reporter that the abises existing along the watershed were the sources c continued annovance to the department. The farm. es and factory people above Katonah were beyond ats reach and could not be compelled to remove their pests. The Corporation Counsel had been authorized to push matters against them; but unless the Legislature passed another act giving the Croton Board officers jurisdiction over the dwellers along the watercourses nothing would ever be done to remedy the matter. He acknowledged his belief in the truth of the accusations made against the persons hereinafter named, and said it was well known that Croton Lake and vicinity was a lively place for fever and ague. He knew that the upper portion of Croton Lake wore a slimy, greenish appearance, and was filled here and there almost down to Pine's Bridge with fungi, but he did not know whether it could be helped or not. What was most needed now was the passage of a law which would give the department power to remove the privies, slaughter houses, hat factories and other things se absolutely infectious. Still he wished to be understood as believing that long before the water enters the acqueduct it was materially freed from taint and actually reached New York good and pure. CROTON DAM.

The Croton Dam proper, that is to say the dam next to the aqueduct at the foot of the take just below Pine's Bridge, is built across the river a little way above Bustersville, in the bend, and is the admiration of visitors who summer at the hotel on the left bank looking north. At this point the water seems pellucid and active, failing many feet as if driven over the curtam's glassy surface by a rapid stream flowing downward between the mountains on either hand. aqueduct's mouth is northeast of the dam some rods and built in the still waters beneath the hill where the broad sheet, smooth and rippleless, washes the shore. The very placidity of its bosom is suggestive. The sur-

WATER SUPPLY.

Showing the Nuisances Daily Contaminating Croton Lake and Its Tributaries.



The map presented contains the names and accurate locations of the property holders, or, more strictly speaking, owners of the soil, as they are known to the inhabitants. There exists no very accurate survey in diagramatic form of the district; the Croton Water Department is in possession of the

than the New YORK HERALD'S. The land, as therein subdivided under the proprietors' names, is in some instances held by the tenants of the persons who actually own the ground. It however retains frequently its proprietary title, and being better known

latest, which is in no sense more complete | thereunder is so designated. The black | etable matter abundant. They are the most openings or mouths of drains leading from the houses and shanties around to Croton Lake. They are likewise significant as being the places where cesspools are numerous,

spots upon the face of the map indicate the filthy receptacles of barnyard refuse, and in many instances, as hereinafter shown, the outlets of slaughter houses, pigpens and worse places. Not a stream that flows into Croton Lake at any point visible on the map plague spots frequent and deposits of veg- is free from the taints marked.

face is totally different in color from the tumultuous cataract and its seething base, which are white, and to the casual observer pure. The bosom of Croton Lake wears a green and stagnant look not unlike that borne by ponds in the city, and those so frequent higher up, or above fKatonah. Just above the aqueduct and dam the lake, through green, is partially clear and good water; but its shores are sedgegrown and undoubtedly marshy, laved by little rivulets and streams that drip, so to speak, down the lofty hill sides from barns, outhouses, hog pens and farm yards, muddy and filth-stained. Weeds and greenish stuff abound, and the torrent, so strong in the river or principal feeder above, is not visible here; so that a boat might lie upon this portion of the lake for hours without materially changing its position, provided it did not get into the line of suction immediately north of the dam over which it would undoubtedly then be drawn. To the right and left, inside the beach curves, abrupt and numerous even at this point, it might re-main all day unaffected by the tow and clogged by the water grasses so thick and abundant not many rods from "the fall."

water grasses so thick and abundant not many rods from "the fall."

CROTON LAKE.

The condition of Croton Lake at this season of the year is such as to afford the spectator a fair opportunity of forming at a glance a partially just estimate of the water's character and cleanliness. Indeed the use of the latter term in this connection is the veriest sarcasm, for assuredly no sheet of water in the rural districts of the State, unless it be Lake Gleneda has more flithy boundaries. Their condition is the fruitful theme of discontented disputation within the reach of the people, who, though residing around the lake, are not bound or likely to drink its waters. Not one of the inhabitants could be induced to do so. They regard the liquid as dirty, if not poisonous. Scarce one person could be found in the neighborhood who would be willing to use the water even for ordinary cooking purposes. The hilly shores are cut and intersected by drains which bear into the lake continually the washing suds, refuse and sewerage of the kutchens and barn yards along the beach and roadsides, from the dam to the Nelson farm or Kip lands. At certain spots, on the western or what might more properly be called the northern boundary, the country folk complain of malaria, with fever and sque, from which whole familice have suffered during the recent summer months, and stories are told of the severe penalities polividuals have paid for having foolishly chosen to summer in the pestilential region.

To form a fair idea of Croton Lake and its surround-

To form a fair idea of Croton Lake and its surroundings one must travel over its shores where the soil will permit or the lake's surface by boat. At the very outset an almost insurmountable difficulty presents itself in the formation of the former and the paucity of the scows and shallops at this season. In the summer when the boarding houses and hotels are open the water its dotted at even tide with light craft of every description occupied by pleasure parties; but in November these houses are closed, scourely fusiened and descried, and the boats are nowhere to be found unless one be fortunate enough to be acquainted with the damkeeper, Mr. Wood, or one of the denizens of the Lockhart farm houses. Even from these it is difficult to hire a skiff. There are only two roads that can be travelled decensity. One is that which skirting the lake leads from Palmer's Hotel northwest of the aqueduct to Nelson Brothers' land where it diverges inland and dives, so to speak, between the hills into the heart of the country and turns its back upon the waters. It crosses Woodbridge at the juncture of Cross River and Croton River, the principal feeders of Croton Lake. The other starts from the aqueduct on the southeastern shore and, mounting the hills, winds toward Mount Kisco and Muscoot hill. On its way to Katonah and leaving the dam, the first which is met, is a rivulet, whose source is in Turkey Mountain, whence it courses downward through the hillocks and tial region.

To form a fair idea of Croton Lake and its surround-

plateaus, washing pens and pastures on its way to the lake, bearing ooze and muck to the edge very little more than 100 rods from the hotel. At its mouth the lake, for yards around, is covered with a sort of slimy grass, weeds and greenish stuff intermingled with decomposed vegetable matter, the accumulation of the last few months. On a warm day, especially after a storm, the water is stagnant and coated with a thick scum, which crusts the line of the Harlem Railway. A glance at the map herewith published will give the reader a just conception of the place. The fairest portion is that between the aqueduct and the Kisco River, which is bisected by Pine's Bridge. Here, although the lake stratches out to its greatest width, the water, while smooth and comparatively clear, is sullied by the continuous flow of the little farm streams that run down the declivities on either hand and discharge their flith through the gullies and creeks every fitteen and twenty rods along the shore. The worst of these are found on the northwest corner of the lake, with an unpleasant odor, similar to that generated by pools and ponds in which cattle and fowl flounder around the country. The water seems motionless and heavy, and although apparently still, must mingle with that which is borne down to the aqueduct and over the dam a short distance below. For the rivulet empties itself into the lake with a western tendency, and the shore recedes toward the dam and aqueduct, giving an inclination thither to the stuff washed away by the Croton. In short, there is a creek at the mouth of Turkey stream, the upper side of which is the repository of decayed grasses, leaves, ooze, indescribable masses and barnyard refuse, and the lower side falls away westward to permit the same being carried toward the mouth of the aqueduct. On the opposite lake shore, near the little white house which indicates the aqueduct's outlet, and all about it for many rods, the same dark green hue pervades the water, and alway necessary of what must be called the beach,

undercurrent ever tending toward the aqueduct; but this is all the worse since the liquid must pass through the weeds and dirt ere it reaches its final outlet.

fed by a drain which trickles down the hill from an pid farm house on the summit, reaches Croton about twenty-six yards above Turkey stream on the north-western shore. It is even more postilential than the foregoing, because the stuff which creeps down its channel cannot be called water, inasmuch as it is nothing less than a thin composition of outhouses and castle pen filth, sufficiently diluted with slops and rainto enable it to drop down to the lake. It is emptied into a semicircular cove about fifteen yards in width, choked and poisened by rotten vegetable refuse like the mouth of Turkey stream. It has no name, being too small to lay claim to designation. But it is by no means insignificant, as it taints the water of Croton Lake so near the aqueduct and cannot be considered other than a positive nuisance to denizens of the neighborhood. Neither is it alone in this distinction, for within eight rods castward is a sister drain, similar in character, pestiferous and green, and equally tributary to the Croton water supply of New York. Both are tinged with the hue of decomposition, and each is passed over as insignificant by the persons in charge of the aqueduct as harmless and unworthy of attention. Still, though they be evils, they sink into comparative obscurity beside the noisome ditch passing by

RES. HTDP's moties.**

Surely this is a noisome hole, fed by a stream of very respectable dimensions that flows through a sort of guich filled with undergrowth weeds, manure, mud and slime under a small wooden bridge to a hollow in a bend a few feet above the lake. In this hollow every species of rural dirt has been accummulating and decaying for months, no doubt, for its bottom is several inches thick and is disgustingly odorous. By pushing a cane into the mess a stench is surred up powerful enough to make one glad to give up further explorations in th

water falling from the hillocks above. Just where the stream, after passing through the hollow, gulch and garbage heap, meets the lake the never-ending marsh and fen is seen; the stagnant appearance prevails and the greenish scum exists. This is in the lake, too, for many yards around. Indeed, all along the shore the water has no other aspect, and here and there at intervals miserable little islands abound. Each one of them stands in what has all the semblance of a marsh; not a weed or blade of the yellowish grass is disturbed by the faintest ripple of flowing water, and even the drains, as they discharge themselves into the lake every few rods upon the shores, cannot create any visible commotion in the weed grown, slimy bosom of Croton Lake. To be sure, there is a patch on its very centre that looks clear and free from matter. But it washes and mingles on either hand with the dense nuisances above described.

Anothers, Placter spot is that which is bounded by an old bridge, about 100 rods above the line of Mrs. Hydo's house. It does not come immediately in contact with the lake itself. It is on the left hand side of the road, looking east. It is an old pool, several square yards in area, fed by the numerous ditchee, barapyard drains and dikes cut into the slope on its western boundary. Near by are several old barns, the property of a small farmer, whose wooden shanty stands about 100 feet above. The hennery, hog pen, cattle yard and stable overlook the pool and empty their hog wash and general flith down the declivity into it. Worse than this, a wretched little backhouse is among the buildings contributing to the general wretchedness of the situation, and adds its quots of refuse to the repository in the bridge pond' below. Now this receptacle's only outlet for surplus water is a small passage between the stones or cobbles at the bridge's base, which courses through the glen on the opposite side of the road to be lake, where it meets the green or stagnant water and momentarily increases the deposit of stuff wh

marsh covered with weeds and leaves, and one would expect to find a muddy bottom. The bottom is really gravel, with a coating of vegetable matter.

MR. TISS' BRIDGE,

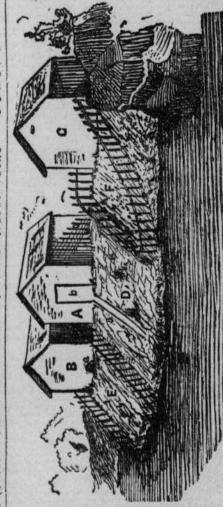
as the country people call the passage across another stream a short way up the road toward Pine's Bridge, stretches over a marsh on the left hand side and an arm of Croton Lake on the right. From this to Pine's Bridge the lake shores are not so had. Nevertheless they are dirty and slimy and not at all what they should be. Just above are located mear the water's edge a couple of houses on the banks of a bayou nearly opposite Hon. Fernando Wood's once famous country residence. This bayou, or, more properly speaking, creek, is fed by a stream that rises in Cat Hill. It is small and filthy, passing as it does by, through and under outhouses, barn yards and worse places. It is full of nodescript matter, laden with dirt, and is actually muddy. No man in the neighborhood ever dreams of letting his horse, be it never so thirsty, drawk from it or the ponds near it. The creek receives all the Cat Hill River contains of refuse, and the waters are of a dark, greenish color, studded by little linsular patches of weeds and leaves, sedge and vegetable muck, always increasing and decaying. The houses themselves are so close to the margin of Croton Lake that it would be ridiculous to suppose that the slops were cast anywhere else. In the best of weather the inhabitants are too far beneath the road to lead one to expect servants or any one to carry pais or tubs up the rugged slope to the deida. Indeed, there is no visible receptacle for such refuse except the bayou, which it an arm of the lake. The laborers on the adjacent farms say that into the lake or drains everything is fung, notwithstanding the tacit understanding of the law's direct prohibition of such practices. But as they say, "Who is to know?" and "Where else can we paid our slops?" nobody will avow that he or she is the guilty party, but the absence of any suitable places for the reception and distribu

the beauty of the scenery. The eastern shore of the lake is dotted by fine houses; a large hotel, boarding houses and a few fine country mansions. Mount Kisco is a splendid part of Westchester county and its sides are watered by the river which bears its name and another that is not endowed with any special appellation. The dwellings are all creeted on the lake shore and the plateaux at different points above it. But they are nuisances, because they are not furnished with any sowerage that does not tend toward Croton Lake and finally tain it. No provision for carrying elsewhere the liquid refuse of the people can be seen. Ali must inovitably be thrown into the drains and small pipes which bubble down the hillside and empty themselves into the great reservoir of New York and the towns along the line of the aqueduct. The backhouses and privice, it is true, are not built near the lake; but they do stand near the aioresaid rustic sewers. Croton Lake itself is protty to look at here, but a mile further up it is full of islands, composed of the prevaient weeds, vegetable matter and sedge, which act simply as barriers to check and hold whatever may be borne down by the Cross River and Croton River, currents from the small towns and shantes upon their banks. The peculiar formation of the lake's shores, east and west, furnishes likewise stagnant patches and spots that foster and generate malarious disorders. Not far from the mouth of the Mount Kisco River is one of the worst of these. Here right across the whole face of Croton Lake stretch haif a dozen islands, affording no foothold for man or beast, surrounded by stagnant green water, bordered with a thick coating of vegetable rottenness and overhung morning and evening by a vapor suggestive of fever and ague. The passages between these spots are narrow and folled with every conceivable species of country side refuse. The waters of the lake which below seem clear, and its some measure bright, are dense and along the heaves of laborers line she not have a superfluous fl

He said that he had never made greater mistake in his life than when he c to reside on the banks of Croton Lake. His wife

ing it as well, for all the good he was able to on, owning to the expense entained upon him by the ill health worst in the country, notwithstanding that it was the boasted Croton Lake that fed New York with water. He would not drink any of it for the fee simple of the house in which he then lived. He could not say that other persons in the neighborhood suffered as he had done, nor could he tell whether they had been stricken with any of the maintous disorders of the region; but and the second that the second the second that the second that the second that the second that any of the maintous disorders of the region; but and were accustomed to the atmosphere. At all events, there was good reason for the condition of the lake, "You see, sir," said he, "the whole steeled whether, or whatever you like to call it, from this to Wood Bridge, or whatever you like to call it, from this to Wood Bridge, is little better than a march. It is full of miserable weed banks and stagnant water. Of course, the water the second of the second the second that the dirty little drains and streams that flow into it were dirty little drains and streams that flow into it were dirty little drains and streams that flow into it were directly little drains and streams that flow into it were directly little drains and streams that flow into it were any stream to the second the second the second the second the second that the sufficient of the second that the seco

Nothing can be more easily understood than a dia-gram, so an accurate ground plan of Whitlock's slaughter houses on the river bank at Croton Falls is here furnished:—



This group of weeden buildings stands about twenty feet above the river with their yards and drains upon and dripping down the short slope to the river. A is the slaughter house and small a is the door through which the blood is allowed to flow from the slaun beasts; D is the slope from the slaughter house to the river filled with dung, dead calves almost putrefied, hides, morsels of offal and other rofuse; B is a hogpen well stocked; E is the slope on which the brudes wallow and flounder; F is the river that washes away the fifth and blood it is continually receiving; and by the cape that holds it and forms the basis of the slongh there existing. Now a word or two of description. The slaughter house is built on the summit of a sharp declivity, about twenty feet from the margis of the river. It has a board flooring, roughly laid and full of interstices opening on to the side of the slope, and on there the animal stands or is laid to be killed. When it oozea between the boards and drips down the side of the eminence, where are also other beasts awaiting the knife, huddled together, fetlock deep in their own and other animals manure. In the hogpen and enclosure reaching to the water's edge, pigs grunt and wallow, and in the adjoining close were pieces of dead kine, old jaws and heads stripped of their hides and a dead calf, stinking and scarcely recognizable. Now, and in the adjoining close were pieces of dead kine, old jaws and heads stripped of their hides and a dead calf, stinking and scarcely recognizable. Now, and in the adjoining close were pieces of dead kine, old jaws and heads stripped of their hides and a dead calf, stinking and scarcely recognizable. Now, and in the surface of their hides and a dead calf, stinking and scarcely recognizable. Now, and in the surface of their hides and a dead calf, stinking and scarcely recognizable. Now, we it remembered, every rain washes this horrible stuff into the river, and every sunlight renders it more disgusting. Care has been taken to cus listing drains through